

FIG. 1A

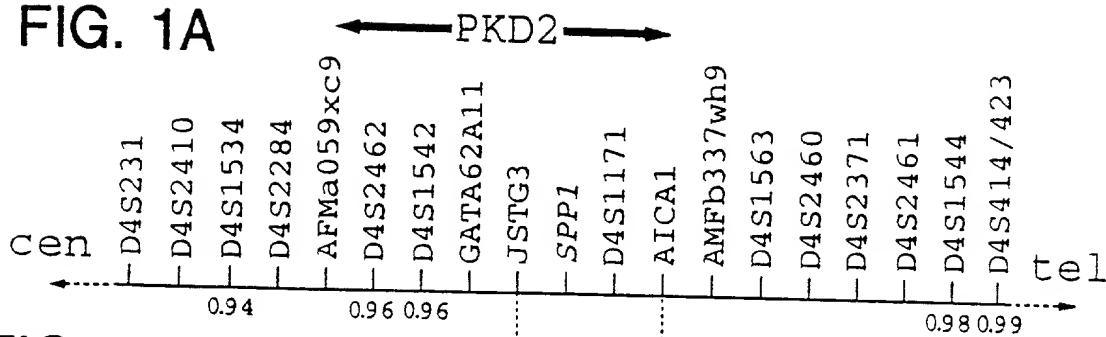


FIG. 1B

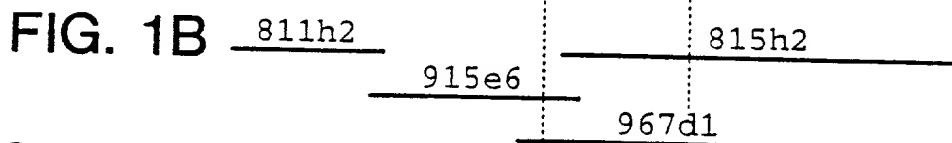


FIG. 1C

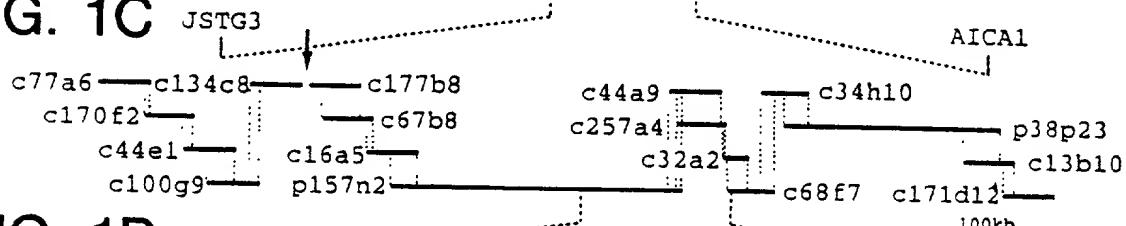


FIG. 1D

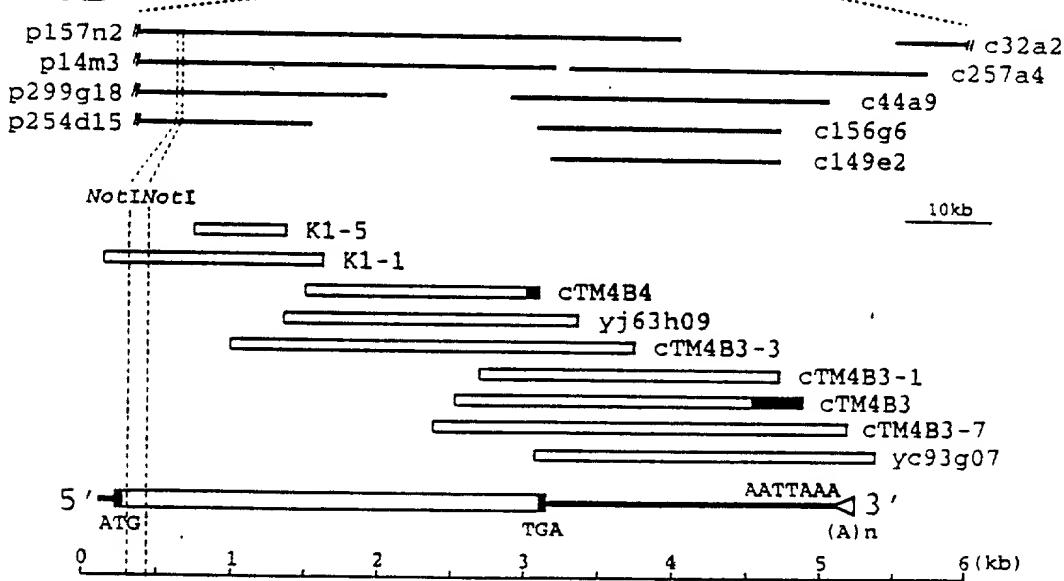


FIG. 1E

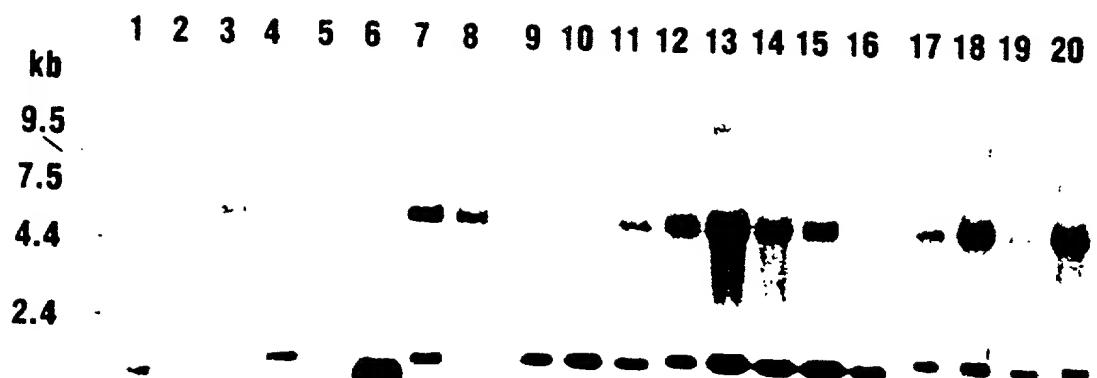
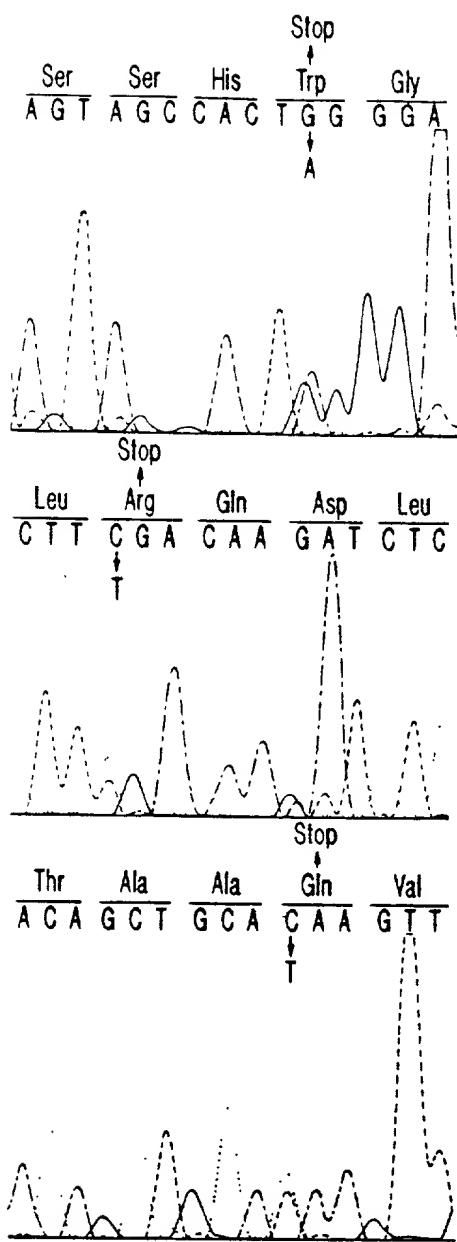
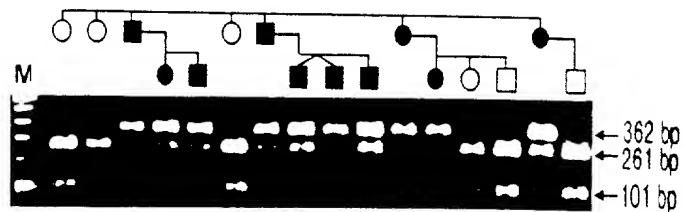


FIG. 2

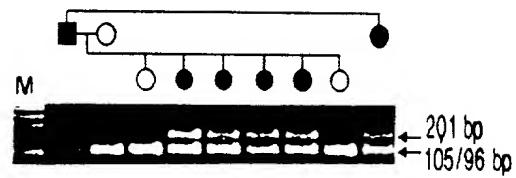
Genotype 0000000000000000



Family 97



Family 1605



Family 1601

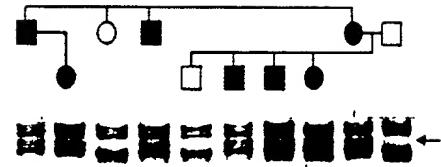


FIG. 3

cTM-4	MVNSSRVQPOPGDAKRPAPRAPDPGLMAGCAVGASLAAPGGCCEORGLEIEMQRIRQAARADPPAGAASPSPPLCSRQAWSRDNPGFEAE	100
cTM-4	EEVEGEEGGMVVMEDVEWRPGSRRSSAAVASVgarsrglggyhaghpssgrrrredqgppccpspvggdplhrhlplegopprvawaerlvrlglrl	200
cTM-4	WGTRLMEESTNREKYLKSVLRELTYFLFLIVCLITYGMMSSNVYTYRMMSQLFDTPVSKTEKTNPRTTSSMEDFWKFTEGSLLDGLYWKMOPSNQ	300
PKD1	(3655)ELAKEARKVKVRKHLGMLRSLLVYMLFLVTLLASYGDA SCHGHAY.RQS.	
ZK945.9	(1708)ENRKMRDEQFLFITRDMLCFFASLYIMVMLTYCKDRHGYWWQLEMSTILNINQKNYGDNT.FMSIOHADFWDWARESLATALLASWYDGNP	
cTM-4	TEADNRSFIFYENLILGVPRIRQLRVNGCSIPODLRDEIKECYDVVSSEDRAFPFGPRNGTA.WIY.TSEKDINGSSHGWGIATYSGAGYYLDLSRTRE	400
PKD1	SSPE.....LGPPLRQVRLQEALEYPDPPGPRVHTCSAAGGFTSDYDVWESPHNGGTWAY.SAPDLGAWSGSCAVYDGGYVQELGSLSE	
ZK945.9	AYGMGRAYMNDDKVSRSMIGITRQVRTRKS (1828)	(1878)YTAKTE.ELTETVSGLLYSSGGYTLMSGTOA
	1601	97
cTM-4	ETAAQAVASLKKNVWLDRGTRATFIDSVYNANINNLFCVVRLLVEPATGGVIPSWOFOPLKLIRYVTTFDFFLAACETIFCFEFIFYVYVEILE.IRIHKL	500
PKD1	ESRDRIRFLQHNLWDNRSSRAVFLLETRYSPAVGLHAUTRLFPAAGRALAALSURPFA RLRSAGLSLPLTSVCILLFAVHFAVAARTW.HREGRW	
ZK945.9	EITLFNKLDSERWIDDHTRAVIEFSAYNAQINYFSVVQOLVEIPKSGIYLPNSWESVRLIKSEGSDGTUVKYYEMLYIFFSVLIFKEIV (2005)	
VACCale-1		(1517)FTMVFSLCECVLKVIAGFEL
	tm3	
cTM-4	HYFR.SFWNCNLDDVVIVVLSSVVAIGNINYIERTSNEV.LLQFL.EDONTFPNFEHAYMOIQFNNAUTVFFWIKLFKEINFNRTMSQSLSTMSRCAKDLF	598
PKD1	RVLRLGAWARWLVALTATALVRLAQLAQDRO..WTRFRGRPRRFSDQVAOLSSAARGLAAASLFLLLUKAQOLREVROWSVFGKTCRALPELL	
ZK945.9	(2039)WNFMDLIVGALAVASVLA VTIQORTTNRAMEDFNANNNGNSYINLTEORNWEIVFSYCLAGAVEFTSCKMIRLRENRRIGVLAATLDNALGAIV	
VACCale-1	NYFR.DTWNIFDFITVIGSITEILITDSKLVNTSG.F.....NMSFLK.....LFRARLIKLRQGTVTRILLWTFVOSFKALP	
	tm4	
cTM-4	GFAIMFFIIFLAYAQOLAYLVFGTQVDDDFSTFQECIFTQFRILIGDINFAEIEAN.RVLGPIYIFTFVFFMFILLNMFALAINDTYSEVKSDL..AQOKA	696
PKD1	GVUTIGLVLGVAYAQOLAILVSSCVDSLMSVAQALL..VCPGTGLISTICPAESWHLSPLLCVCGLWALRNGALRGA VILRWRYHALRGELYRPAWEO	
ZK945.9	SFGIAFLFFSMTFNSVLYAVLGNKMGYRSLSMATAFOTALAGMLGKLDVTSIQ....ISOFAFVIMLYMI2199	
VACCale-1	YVCLLIAMLFFFYIAYIGMQVFGNNFRSFFEGSMLLERSATGE.AWOEIERCG.TDLAYVYFUSFIFCSFLMLNLFVAVIMDNFEYLRD.....	
	(1630)	(1644)
	1605	(1668) (1692)
	tm5	
cTM-4	EMELSLDIRKGHKALVKKNTVDIDESLRQGGKLNFFDELRQDLKGKHTDAEIAIFTKYDQDGQELTEHEHQOMRDDEKEREDELDLHDSSLR	800
PKD1	DYEMVLE.....LRRRL (4139)	
ZK945.9		
VACCale-1		
	2216) EFERINDSEKQNDYEI (2233)	
	1767)	
cTM-4	HREQMERLVEELERWESDDAASQISHGLGTPVGLNGOPRPRSSRPSSES.TEGMAGGNGSSNVHV	968
VACCale-1	(2039)ERRSKERKHLLSPDVSRNCSEERTQADWESPERROSRSQTPNRQGTGSLSESI	(2100)

FIG. 4A

E I E A I F T K Y D Q D G D Q E L T E H E H Q Q M R D D L (754-782)
I I I I I I I I I I I I I I I I I I
E n n n n * * * * * * * * * * * *
x y z -y -x -z -z
(coordination vertices)

FIG. 4B

	GGC TCC TGA GGC GCA CAG	18
CGC CGA GCG CGG CGC CGC GCA CCC GCG CGC CGG ACG CCA GTG ACC GCG		66
ATG GTG AAC TCC AGT CGC GTG CAG CCT CAG CAG CCC GGG GAC GCC AAG Met Val Asn Ser Ser Arg Val Gln Pro Gln Gln Pro Gly Asp Ala Lys		114
1 5 10 15		
CGG CCG CCC GCG CCC CGC GCG CCG GAC CCG GGC CGG CTG ATG GCT GGC Arg Pro Pro Ala Pro Arg Ala Pro Asp Pro Gly Arg Leu Met Ala Gly		162
20 25 30		
TGC GCG GCC GTG GGC GCC AGC CTC GCC CCG GGC GGC CTC TGC GAG Cys Ala Ala Val Gly Ala Ser Leu Ala Ala Pro Gly Gly Leu Cys Glu		210
35 40 45		
CAG CGG GGC CTG GAG ATC GAG ATG CAG CGC ATC CGG CAG GCG GCC GCG Gln Arg Gly Leu Glu Ile Glu Met Gln Arg Ile Arg Gln Ala Ala Ala		258
50 55 60		
CGG GAC CCC CCG GCC GGA GCC GCG GCC TCC CCT TCT CCT CCG CTC TCG Arg Asp Pro Pro Ala Gly Ala Ala Ser Pro Ser Pro Pro Leu Ser		306
65 70 75 80		
TCG TGC TCC CGG CAG GCG TGG AGC CGC GAT AAC CCC GGC TTC GAG GCC Ser Cys Ser Arg Gln Ala Trp Ser Arg Asp Asn Pro Gly Phe Glu Ala		354
85 90 95		
GAG GAG GAG GAG GAG GTG GAA GGG GAA GAA GGC GGA ATG GTG GTG Glu Glu Glu Glu Glu Val Glu Gly Glu Glu Gly Gly Met Val Val		402
100 105 110		
GAG ATG GAC GTA GAG TGG CGC CCG GGC AGC CGG AGG TCG GCC GCC TCC Glu Met Asp Val Glu Trp Arg Pro Gly Ser Arg Arg Ser Ala Ala Ser		450
115 120 125		
TCG GCC GTG AGC TCC GTG GGC GCG CGG AGC CGG GGG CTT GGG GGC TAC Ser Ala Val Ser Ser Val Gly Ala Arg Ser Arg Gly Leu Gly Gly Tyr		498
130 135 140		
CAC GGC GCG GGC CAC CCG AGC GGG AGG CGG CGC CGG CGA GAG GAC CAG His Gly Ala Gly His Pro Ser Gly Arg Arg Arg Arg Glu Asp Gln		546
145 150 155 160		
GGC CCG CCG TGC CCC AGC CCA GTC GGC GGC GGG GAC CCG CTG CAT CGC Gly Pro Pro Cys Pro Ser Pro Val Gly Gly Asp Pro Leu His Arg		594
165 170 175		
CAC CTC CCC CTG GAA GGG CAG CCG CCC CGA GTG GCC TGG GCG GAG AGG His Leu Pro Leu Glu Gly Gln Pro Pro Arg Val Ala Trp Ala Glu Arg		642
180 185 190		

FIG. 5A

DRAFT - DRAFT

CTG GTT CGC GGG CTG CGA GGT CTC TGG GGA ACA AGA CTC ATG GAG GAA		690
Leu Val Arg Gly Leu Arg Gly Leu Trp Gly Thr Arg Leu Met Glu Glu		
195	200	205
AGC AGC ACT AAC CGA GAG AAA TAC CTT AAA AGT GTT TTA CGG GAA CTG		738
Ser Ser Thr Asn Arg Glu Lys Tyr Leu Lys Ser Val Leu Arg Glu Leu		
210	215	220
GTC ACA TAC CTC CTT TTT CTC ATA GTC TTG TGC ATC TTG ACC TAC GGC		786
Val Thr Tyr Leu Leu Phe Leu Ile Val Leu Cys Ile Leu Thr Tyr Gly		
225	230	235
ATG ATG AGC TCC AAT GTG TAC TAC ACC CGG ATG ATG TCA CAG CTC		834
Met Met Ser Ser Asn Val Tyr Tyr Thr Arg Met Met Ser Gln Leu		
245	250	255
TTC CTA GAC ACC CCC GTG TCC AAA ACG GAG AAA ACT AAC TTT AAA ACT		882
Phe Leu Asp Thr Pro Val Ser Lys Thr Glu Lys Thr Asn Phe Lys Thr		
260	265	270
CTG TCT TCC ATG GAA GAC TTC TGG AAG TTC ACA GAA GGC TCC TTA TTG		930
Leu Ser Ser Met Glu Asp Phe Trp Lys Phe Thr Glu Gly Ser Leu Leu		
275	280	285
GAT GGG CTG TAC TGG AAG ATG CAG CCC AGC AAC CAG ACT GAA GCT GAC		978
Asp Gly Leu Tyr Trp Lys Met Gln Pro Ser Asn Gln Thr Glu Ala Asp		
290	295	300
AAC CGA AGT TTC ATC TTC TAT GAG AAC CTG CTG TTA GGG GTT CCA CGA		1026
Asn Arg Ser Phe Ile Phe Tyr Glu Asn Leu Leu Gly Val Pro Arg		
305	310	315
ATA CGG CAA CTC CGA GTC AGA AAT GGA TCC TGC TCT ATC CCC CAG GAC		1074
Ile Arg Gln Leu Arg Val Arg Asn Gly Ser Cys Ser Ile Pro Gln Asp		
325	330	335
TTG AGA GAT GAA ATT AAA GAG TGC TAT GAT GTC TAC TCT GTC AGT AGT		1122
Leu Arg Asp Glu Ile Lys Glu Cys Tyr Asp Val Tyr Ser Val Ser Ser		
340	345	350
GAA GAT AGG GCT CCC TTT GGG CCC CGA AAT GGA ACC GCT TGG ATC TAC		1170
Glu Asp Arg Ala Pro Phe Gly Pro Arg Asn Gly Thr Ala Trp Ile Tyr		
355	360	365
ACA AGT GAA AAA GAC TTG AAT GGT AGT AGC CAC TGG GGA ATC ATT GCA		1218
Thr Ser Glu Lys Asp Leu Asn Gly Ser Ser His Trp Gly Ile Ile Ala		
370	375	380
ACT TAT AGT GGA GCT GGC TAT TAT CTG GAT TTG TCA AGA ACA AGA GAG		1266
Thr Tyr Ser Gly Ala Gly Tyr Tyr Leu Asp Leu Ser Arg Thr Arg Glu		
385	390	395
		400

FIG. 5B

DRAFT

GAA ACA GCT GCA CAA GTT GCT AGC CTC AAG AAA AAT GTC TGG CTG GAC 1314
 Glu Thr Ala Ala Gln Val Ala Ser Leu Lys Lys Asn Val Trp Leu Asp
 405 410 415

 CGA GGA ACC AGG GCA ACT TTT ATT GAC TTC TCA GTG TAC AAC GCC AAC 1362
 Arg Gly Thr Arg Ala Thr Phe Ile Asp Phe Ser Val Tyr Asn Ala Asn
 420 425 430

 ATT AAC CTG TTC TGT GTG GTC AGG TTA TTG GTT GAA TTC CCA GCA ACA 1410
 Ile Asn Leu Phe Cys Val Val Arg Leu Leu Val Glu Phe Pro Ala Thr
 435 440 445

 GGT GGT GTG ATT CCA TCT TGG CAA TTT CAG CCT TTA AAG CTG ATC CGA 1458
 Gly Gly Val Ile Pro Ser Trp Gln Phe Gln Pro Leu Lys Leu Ile Arg
 450 455 460

 TAT GTC ACA ACT TTT GAT TTC TTC CTG GCA GCC TGT GAG ATT ATC TTT 1506
 Tyr Val Thr Thr Phe Asp Phe Leu Ala Ala Cys Glu Ile Ile Phe
 465 470 475 480

 TGT TTC TTT ATC TTT TAC TAT GTG GTG GAA GAG ATA TTG GAA ATT CGC 1554
 Cys Phe Phe Ile Phe Tyr Tyr Val Val Glu Glu Ile Leu Glu Ile Arg
 485 490 495

 ATT CAC AAA CTA CAC TAT TTC AGG AGT TTC TGG AAT TGT CTG GAT GTT 1602
 Ile His Lys Leu His Tyr Phe Arg Ser Phe Trp Asn Cys Leu Asp Val
 500 505 510

 GTG ATC GTT GTG CTG TCA GTG GTA GCT ATA GGA ATT AAC ATA TAC AGA 1650
 Val Ile Val Val Leu Ser Val Val Ala Ile Gly Ile Asn Ile Tyr Arg
 515 520 525

 ACA TCA AAT GTG GAG GTG CTA CTA CAG TTT CTG GAA GAT CAA AAT ACT 1698
 Thr Ser Asn Val Glu Val Leu Leu Gln Phe Leu Glu Asp Gln Asn Thr
 530 535 540

 TTC CCC AAC TTT GAG CAT CTG GCA TAT TGG CAG ATA CAG TTC AAC AAT 1746
 Phe Pro Asn Phe Glu His Leu Ala Tyr Trp Gln Ile Gln Phe Asn Asn
 545 550 555 560

 ATA GCT GCT GTC ACA GTA TTT TTT GTC TGG ATT AAG CTC TTC AAA TTC 1794
 Ile Ala Ala Val Thr Val Phe Phe Val Trp Ile Lys Leu Phe Lys Phe
 565 570 575

 ATC AAT TTT AAC AGG ACC ATG AGC CAG CTC TCG ACA ACC ATG TCT CGA 1842
 Ile Asn Phe Asn Arg Thr Met Ser Gln Leu Ser Thr Thr Met Ser Arg
 580 585 590

 TGT GCC AAA GAC CTG TTT GGC TTT GCT ATT ATG TTC TTC ATT ATT TTC 1890
 Cys Ala Lys Asp Leu Phe Gly Phe Ala Ile Met Phe Phe Ile Ile Phe
 595 600 605

FIG. 5C

DRAFT

CTA GCG TAT GCT CAG TTG GCA TAC CTT GTC TTT GGC ACT CAG GTC GAT	1938																																																																																																								
Leu Ala Tyr Ala Gln Leu Ala Tyr Leu Val Phe Gly Thr Gln Val Asp																																																																																																									
610	615	620		GAC TTC AGT ACT TTC CAA GAG TGT ATC TTC ACT CAA TTC CGT ATC ATT	1986	Asp Phe Ser Thr Phe Gln Glu Cys Ile Phe Thr Gln Phe Arg Ile Ile		625	630	635		640		TTG GGC GAT ATC AAC TTT GCA GAG ATT GAG GAA GCT AAT CGA GTT TTG	2034	Leu Gly Asp Ile Asn Phe Ala Glu Ile Glu Glu Ala Asn Arg Val Leu		645	650	655		GGA CCA ATT TAT TTC ACT ACA TTT GTG TTC TTT ATG TTC TTC ATT CTT	2082	Gly Pro Ile Tyr Phe Thr Phe Val Phe Phe Met Phe Phe Ile Leu		660	665	670		TTG AAT ATG TTT TTG GCT ATC ATC AAT GAT ACT TAC TCT GAA GTG AAA	2130	Leu Asn Met Phe Leu Ala Ile Ile Asn Asp Thr Tyr Ser Glu Val Lys		675	680	685		TCT GAC TTG GCA CAG CAG AAA GCT GAA ATG GAA CTC TCA GAT CTT ATC	2178	Ser Asp Leu Ala Gln Gln Lys Ala Glu Met Glu Leu Ser Asp Leu Ile		690	695	700		AGA AAG GGC TAC CAT AAA GCT TTG GTC AAA CTA AAA CTG AAA AAA AAT	2226	Arg Lys Gly Tyr His Lys Ala Leu Val Lys Leu Lys Leu Lys Lys Asn		705	710	715		720		ACC GTG GAT GAC ATT TCA GAG AGT CTG CGG CAA GGA GGA GGC AAG TTA	2274	Thr Val Asp Asp Ile Ser Glu Ser Leu Arg Gln Gly Gly Gly Lys Leu		725	730	735		AAC TTT GAC GAA CTT CGA CAA GAT CTC AAA GGG AAG GGC CAT ACT GAT	2322	Asn Phe Asp Glu Leu Arg Gln Asp Leu Lys Gly Lys Gly His Thr Asp		740	745	750		GCA GAG ATT GAG GCA ATA TTC ACA AAG TAC GAC CAA GAT GGA GAC CAA	2370	Ala Glu Ile Glu Ala Ile Phe Thr Lys Tyr Asp Gln Asp Gly Asp Gln		755	760	765		GAA CTG ACC GAA CAT GAA CAT CAG CAG ATG AGA GAC GAC TTG GAG AAA	2418	Glu Leu Thr Glu His Glu His Gln Gln Met Arg Asp Asp Leu Glu Lys		770	775	780		GAG AGG GAG GAC CTG GAT TTG GAT CAC AGT TCT TTA CCA CGT CCC ATG	2466	Glu Arg Glu Asp Leu Asp Leu Asp His Ser Ser Leu Pro Arg Pro Met		785	790	795		800		AGC AGC CGA AGT TTC CCT CGA AGC CTG GAT GAC TCT GAG GAG GAT GAC	2514	Ser Ser Arg Ser Phe Pro Arg Ser Leu Asp Asp Ser Glu Glu Asp Asp		805	810	815	
620																																																																																																									
GAC TTC AGT ACT TTC CAA GAG TGT ATC TTC ACT CAA TTC CGT ATC ATT	1986																																																																																																								
Asp Phe Ser Thr Phe Gln Glu Cys Ile Phe Thr Gln Phe Arg Ile Ile																																																																																																									
625	630	635		640		TTG GGC GAT ATC AAC TTT GCA GAG ATT GAG GAA GCT AAT CGA GTT TTG	2034	Leu Gly Asp Ile Asn Phe Ala Glu Ile Glu Glu Ala Asn Arg Val Leu		645	650	655		GGA CCA ATT TAT TTC ACT ACA TTT GTG TTC TTT ATG TTC TTC ATT CTT	2082	Gly Pro Ile Tyr Phe Thr Phe Val Phe Phe Met Phe Phe Ile Leu		660	665	670		TTG AAT ATG TTT TTG GCT ATC ATC AAT GAT ACT TAC TCT GAA GTG AAA	2130	Leu Asn Met Phe Leu Ala Ile Ile Asn Asp Thr Tyr Ser Glu Val Lys		675	680	685		TCT GAC TTG GCA CAG CAG AAA GCT GAA ATG GAA CTC TCA GAT CTT ATC	2178	Ser Asp Leu Ala Gln Gln Lys Ala Glu Met Glu Leu Ser Asp Leu Ile		690	695	700		AGA AAG GGC TAC CAT AAA GCT TTG GTC AAA CTA AAA CTG AAA AAA AAT	2226	Arg Lys Gly Tyr His Lys Ala Leu Val Lys Leu Lys Leu Lys Lys Asn		705	710	715		720		ACC GTG GAT GAC ATT TCA GAG AGT CTG CGG CAA GGA GGA GGC AAG TTA	2274	Thr Val Asp Asp Ile Ser Glu Ser Leu Arg Gln Gly Gly Gly Lys Leu		725	730	735		AAC TTT GAC GAA CTT CGA CAA GAT CTC AAA GGG AAG GGC CAT ACT GAT	2322	Asn Phe Asp Glu Leu Arg Gln Asp Leu Lys Gly Lys Gly His Thr Asp		740	745	750		GCA GAG ATT GAG GCA ATA TTC ACA AAG TAC GAC CAA GAT GGA GAC CAA	2370	Ala Glu Ile Glu Ala Ile Phe Thr Lys Tyr Asp Gln Asp Gly Asp Gln		755	760	765		GAA CTG ACC GAA CAT GAA CAT CAG CAG ATG AGA GAC GAC TTG GAG AAA	2418	Glu Leu Thr Glu His Glu His Gln Gln Met Arg Asp Asp Leu Glu Lys		770	775	780		GAG AGG GAG GAC CTG GAT TTG GAT CAC AGT TCT TTA CCA CGT CCC ATG	2466	Glu Arg Glu Asp Leu Asp Leu Asp His Ser Ser Leu Pro Arg Pro Met		785	790	795		800		AGC AGC CGA AGT TTC CCT CGA AGC CTG GAT GAC TCT GAG GAG GAT GAC	2514	Ser Ser Arg Ser Phe Pro Arg Ser Leu Asp Asp Ser Glu Glu Asp Asp		805	810	815									
635		640		TTG GGC GAT ATC AAC TTT GCA GAG ATT GAG GAA GCT AAT CGA GTT TTG	2034	Leu Gly Asp Ile Asn Phe Ala Glu Ile Glu Glu Ala Asn Arg Val Leu		645	650	655		GGA CCA ATT TAT TTC ACT ACA TTT GTG TTC TTT ATG TTC TTC ATT CTT	2082	Gly Pro Ile Tyr Phe Thr Phe Val Phe Phe Met Phe Phe Ile Leu		660	665	670		TTG AAT ATG TTT TTG GCT ATC ATC AAT GAT ACT TAC TCT GAA GTG AAA	2130	Leu Asn Met Phe Leu Ala Ile Ile Asn Asp Thr Tyr Ser Glu Val Lys		675	680	685		TCT GAC TTG GCA CAG CAG AAA GCT GAA ATG GAA CTC TCA GAT CTT ATC	2178	Ser Asp Leu Ala Gln Gln Lys Ala Glu Met Glu Leu Ser Asp Leu Ile		690	695	700		AGA AAG GGC TAC CAT AAA GCT TTG GTC AAA CTA AAA CTG AAA AAA AAT	2226	Arg Lys Gly Tyr His Lys Ala Leu Val Lys Leu Lys Leu Lys Lys Asn		705	710	715		720		ACC GTG GAT GAC ATT TCA GAG AGT CTG CGG CAA GGA GGA GGC AAG TTA	2274	Thr Val Asp Asp Ile Ser Glu Ser Leu Arg Gln Gly Gly Gly Lys Leu		725	730	735		AAC TTT GAC GAA CTT CGA CAA GAT CTC AAA GGG AAG GGC CAT ACT GAT	2322	Asn Phe Asp Glu Leu Arg Gln Asp Leu Lys Gly Lys Gly His Thr Asp		740	745	750		GCA GAG ATT GAG GCA ATA TTC ACA AAG TAC GAC CAA GAT GGA GAC CAA	2370	Ala Glu Ile Glu Ala Ile Phe Thr Lys Tyr Asp Gln Asp Gly Asp Gln		755	760	765		GAA CTG ACC GAA CAT GAA CAT CAG CAG ATG AGA GAC GAC TTG GAG AAA	2418	Glu Leu Thr Glu His Glu His Gln Gln Met Arg Asp Asp Leu Glu Lys		770	775	780		GAG AGG GAG GAC CTG GAT TTG GAT CAC AGT TCT TTA CCA CGT CCC ATG	2466	Glu Arg Glu Asp Leu Asp Leu Asp His Ser Ser Leu Pro Arg Pro Met		785	790	795		800		AGC AGC CGA AGT TTC CCT CGA AGC CTG GAT GAC TCT GAG GAG GAT GAC	2514	Ser Ser Arg Ser Phe Pro Arg Ser Leu Asp Asp Ser Glu Glu Asp Asp		805	810	815											
640																																																																																																									
TTG GGC GAT ATC AAC TTT GCA GAG ATT GAG GAA GCT AAT CGA GTT TTG	2034																																																																																																								
Leu Gly Asp Ile Asn Phe Ala Glu Ile Glu Glu Ala Asn Arg Val Leu																																																																																																									
645	650	655		GGA CCA ATT TAT TTC ACT ACA TTT GTG TTC TTT ATG TTC TTC ATT CTT	2082	Gly Pro Ile Tyr Phe Thr Phe Val Phe Phe Met Phe Phe Ile Leu		660	665	670		TTG AAT ATG TTT TTG GCT ATC ATC AAT GAT ACT TAC TCT GAA GTG AAA	2130	Leu Asn Met Phe Leu Ala Ile Ile Asn Asp Thr Tyr Ser Glu Val Lys		675	680	685		TCT GAC TTG GCA CAG CAG AAA GCT GAA ATG GAA CTC TCA GAT CTT ATC	2178	Ser Asp Leu Ala Gln Gln Lys Ala Glu Met Glu Leu Ser Asp Leu Ile		690	695	700		AGA AAG GGC TAC CAT AAA GCT TTG GTC AAA CTA AAA CTG AAA AAA AAT	2226	Arg Lys Gly Tyr His Lys Ala Leu Val Lys Leu Lys Leu Lys Lys Asn		705	710	715		720		ACC GTG GAT GAC ATT TCA GAG AGT CTG CGG CAA GGA GGA GGC AAG TTA	2274	Thr Val Asp Asp Ile Ser Glu Ser Leu Arg Gln Gly Gly Gly Lys Leu		725	730	735		AAC TTT GAC GAA CTT CGA CAA GAT CTC AAA GGG AAG GGC CAT ACT GAT	2322	Asn Phe Asp Glu Leu Arg Gln Asp Leu Lys Gly Lys Gly His Thr Asp		740	745	750		GCA GAG ATT GAG GCA ATA TTC ACA AAG TAC GAC CAA GAT GGA GAC CAA	2370	Ala Glu Ile Glu Ala Ile Phe Thr Lys Tyr Asp Gln Asp Gly Asp Gln		755	760	765		GAA CTG ACC GAA CAT GAA CAT CAG CAG ATG AGA GAC GAC TTG GAG AAA	2418	Glu Leu Thr Glu His Glu His Gln Gln Met Arg Asp Asp Leu Glu Lys		770	775	780		GAG AGG GAG GAC CTG GAT TTG GAT CAC AGT TCT TTA CCA CGT CCC ATG	2466	Glu Arg Glu Asp Leu Asp Leu Asp His Ser Ser Leu Pro Arg Pro Met		785	790	795		800		AGC AGC CGA AGT TTC CCT CGA AGC CTG GAT GAC TCT GAG GAG GAT GAC	2514	Ser Ser Arg Ser Phe Pro Arg Ser Leu Asp Asp Ser Glu Glu Asp Asp		805	810	815																			
655																																																																																																									
GGA CCA ATT TAT TTC ACT ACA TTT GTG TTC TTT ATG TTC TTC ATT CTT	2082																																																																																																								
Gly Pro Ile Tyr Phe Thr Phe Val Phe Phe Met Phe Phe Ile Leu																																																																																																									
660	665	670		TTG AAT ATG TTT TTG GCT ATC ATC AAT GAT ACT TAC TCT GAA GTG AAA	2130	Leu Asn Met Phe Leu Ala Ile Ile Asn Asp Thr Tyr Ser Glu Val Lys		675	680	685		TCT GAC TTG GCA CAG CAG AAA GCT GAA ATG GAA CTC TCA GAT CTT ATC	2178	Ser Asp Leu Ala Gln Gln Lys Ala Glu Met Glu Leu Ser Asp Leu Ile		690	695	700		AGA AAG GGC TAC CAT AAA GCT TTG GTC AAA CTA AAA CTG AAA AAA AAT	2226	Arg Lys Gly Tyr His Lys Ala Leu Val Lys Leu Lys Leu Lys Lys Asn		705	710	715		720		ACC GTG GAT GAC ATT TCA GAG AGT CTG CGG CAA GGA GGA GGC AAG TTA	2274	Thr Val Asp Asp Ile Ser Glu Ser Leu Arg Gln Gly Gly Gly Lys Leu		725	730	735		AAC TTT GAC GAA CTT CGA CAA GAT CTC AAA GGG AAG GGC CAT ACT GAT	2322	Asn Phe Asp Glu Leu Arg Gln Asp Leu Lys Gly Lys Gly His Thr Asp		740	745	750		GCA GAG ATT GAG GCA ATA TTC ACA AAG TAC GAC CAA GAT GGA GAC CAA	2370	Ala Glu Ile Glu Ala Ile Phe Thr Lys Tyr Asp Gln Asp Gly Asp Gln		755	760	765		GAA CTG ACC GAA CAT GAA CAT CAG CAG ATG AGA GAC GAC TTG GAG AAA	2418	Glu Leu Thr Glu His Glu His Gln Gln Met Arg Asp Asp Leu Glu Lys		770	775	780		GAG AGG GAG GAC CTG GAT TTG GAT CAC AGT TCT TTA CCA CGT CCC ATG	2466	Glu Arg Glu Asp Leu Asp Leu Asp His Ser Ser Leu Pro Arg Pro Met		785	790	795		800		AGC AGC CGA AGT TTC CCT CGA AGC CTG GAT GAC TCT GAG GAG GAT GAC	2514	Ser Ser Arg Ser Phe Pro Arg Ser Leu Asp Asp Ser Glu Glu Asp Asp		805	810	815																											
670																																																																																																									
TTG AAT ATG TTT TTG GCT ATC ATC AAT GAT ACT TAC TCT GAA GTG AAA	2130																																																																																																								
Leu Asn Met Phe Leu Ala Ile Ile Asn Asp Thr Tyr Ser Glu Val Lys																																																																																																									
675	680	685		TCT GAC TTG GCA CAG CAG AAA GCT GAA ATG GAA CTC TCA GAT CTT ATC	2178	Ser Asp Leu Ala Gln Gln Lys Ala Glu Met Glu Leu Ser Asp Leu Ile		690	695	700		AGA AAG GGC TAC CAT AAA GCT TTG GTC AAA CTA AAA CTG AAA AAA AAT	2226	Arg Lys Gly Tyr His Lys Ala Leu Val Lys Leu Lys Leu Lys Lys Asn		705	710	715		720		ACC GTG GAT GAC ATT TCA GAG AGT CTG CGG CAA GGA GGA GGC AAG TTA	2274	Thr Val Asp Asp Ile Ser Glu Ser Leu Arg Gln Gly Gly Gly Lys Leu		725	730	735		AAC TTT GAC GAA CTT CGA CAA GAT CTC AAA GGG AAG GGC CAT ACT GAT	2322	Asn Phe Asp Glu Leu Arg Gln Asp Leu Lys Gly Lys Gly His Thr Asp		740	745	750		GCA GAG ATT GAG GCA ATA TTC ACA AAG TAC GAC CAA GAT GGA GAC CAA	2370	Ala Glu Ile Glu Ala Ile Phe Thr Lys Tyr Asp Gln Asp Gly Asp Gln		755	760	765		GAA CTG ACC GAA CAT GAA CAT CAG CAG ATG AGA GAC GAC TTG GAG AAA	2418	Glu Leu Thr Glu His Glu His Gln Gln Met Arg Asp Asp Leu Glu Lys		770	775	780		GAG AGG GAG GAC CTG GAT TTG GAT CAC AGT TCT TTA CCA CGT CCC ATG	2466	Glu Arg Glu Asp Leu Asp Leu Asp His Ser Ser Leu Pro Arg Pro Met		785	790	795		800		AGC AGC CGA AGT TTC CCT CGA AGC CTG GAT GAC TCT GAG GAG GAT GAC	2514	Ser Ser Arg Ser Phe Pro Arg Ser Leu Asp Asp Ser Glu Glu Asp Asp		805	810	815																																			
685																																																																																																									
TCT GAC TTG GCA CAG CAG AAA GCT GAA ATG GAA CTC TCA GAT CTT ATC	2178																																																																																																								
Ser Asp Leu Ala Gln Gln Lys Ala Glu Met Glu Leu Ser Asp Leu Ile																																																																																																									
690	695	700		AGA AAG GGC TAC CAT AAA GCT TTG GTC AAA CTA AAA CTG AAA AAA AAT	2226	Arg Lys Gly Tyr His Lys Ala Leu Val Lys Leu Lys Leu Lys Lys Asn		705	710	715		720		ACC GTG GAT GAC ATT TCA GAG AGT CTG CGG CAA GGA GGA GGC AAG TTA	2274	Thr Val Asp Asp Ile Ser Glu Ser Leu Arg Gln Gly Gly Gly Lys Leu		725	730	735		AAC TTT GAC GAA CTT CGA CAA GAT CTC AAA GGG AAG GGC CAT ACT GAT	2322	Asn Phe Asp Glu Leu Arg Gln Asp Leu Lys Gly Lys Gly His Thr Asp		740	745	750		GCA GAG ATT GAG GCA ATA TTC ACA AAG TAC GAC CAA GAT GGA GAC CAA	2370	Ala Glu Ile Glu Ala Ile Phe Thr Lys Tyr Asp Gln Asp Gly Asp Gln		755	760	765		GAA CTG ACC GAA CAT GAA CAT CAG CAG ATG AGA GAC GAC TTG GAG AAA	2418	Glu Leu Thr Glu His Glu His Gln Gln Met Arg Asp Asp Leu Glu Lys		770	775	780		GAG AGG GAG GAC CTG GAT TTG GAT CAC AGT TCT TTA CCA CGT CCC ATG	2466	Glu Arg Glu Asp Leu Asp Leu Asp His Ser Ser Leu Pro Arg Pro Met		785	790	795		800		AGC AGC CGA AGT TTC CCT CGA AGC CTG GAT GAC TCT GAG GAG GAT GAC	2514	Ser Ser Arg Ser Phe Pro Arg Ser Leu Asp Asp Ser Glu Glu Asp Asp		805	810	815																																											
700																																																																																																									
AGA AAG GGC TAC CAT AAA GCT TTG GTC AAA CTA AAA CTG AAA AAA AAT	2226																																																																																																								
Arg Lys Gly Tyr His Lys Ala Leu Val Lys Leu Lys Leu Lys Lys Asn																																																																																																									
705	710	715		720		ACC GTG GAT GAC ATT TCA GAG AGT CTG CGG CAA GGA GGA GGC AAG TTA	2274	Thr Val Asp Asp Ile Ser Glu Ser Leu Arg Gln Gly Gly Gly Lys Leu		725	730	735		AAC TTT GAC GAA CTT CGA CAA GAT CTC AAA GGG AAG GGC CAT ACT GAT	2322	Asn Phe Asp Glu Leu Arg Gln Asp Leu Lys Gly Lys Gly His Thr Asp		740	745	750		GCA GAG ATT GAG GCA ATA TTC ACA AAG TAC GAC CAA GAT GGA GAC CAA	2370	Ala Glu Ile Glu Ala Ile Phe Thr Lys Tyr Asp Gln Asp Gly Asp Gln		755	760	765		GAA CTG ACC GAA CAT GAA CAT CAG CAG ATG AGA GAC GAC TTG GAG AAA	2418	Glu Leu Thr Glu His Glu His Gln Gln Met Arg Asp Asp Leu Glu Lys		770	775	780		GAG AGG GAG GAC CTG GAT TTG GAT CAC AGT TCT TTA CCA CGT CCC ATG	2466	Glu Arg Glu Asp Leu Asp Leu Asp His Ser Ser Leu Pro Arg Pro Met		785	790	795		800		AGC AGC CGA AGT TTC CCT CGA AGC CTG GAT GAC TCT GAG GAG GAT GAC	2514	Ser Ser Arg Ser Phe Pro Arg Ser Leu Asp Asp Ser Glu Glu Asp Asp		805	810	815																																																			
715		720		ACC GTG GAT GAC ATT TCA GAG AGT CTG CGG CAA GGA GGA GGC AAG TTA	2274	Thr Val Asp Asp Ile Ser Glu Ser Leu Arg Gln Gly Gly Gly Lys Leu		725	730	735		AAC TTT GAC GAA CTT CGA CAA GAT CTC AAA GGG AAG GGC CAT ACT GAT	2322	Asn Phe Asp Glu Leu Arg Gln Asp Leu Lys Gly Lys Gly His Thr Asp		740	745	750		GCA GAG ATT GAG GCA ATA TTC ACA AAG TAC GAC CAA GAT GGA GAC CAA	2370	Ala Glu Ile Glu Ala Ile Phe Thr Lys Tyr Asp Gln Asp Gly Asp Gln		755	760	765		GAA CTG ACC GAA CAT GAA CAT CAG CAG ATG AGA GAC GAC TTG GAG AAA	2418	Glu Leu Thr Glu His Glu His Gln Gln Met Arg Asp Asp Leu Glu Lys		770	775	780		GAG AGG GAG GAC CTG GAT TTG GAT CAC AGT TCT TTA CCA CGT CCC ATG	2466	Glu Arg Glu Asp Leu Asp Leu Asp His Ser Ser Leu Pro Arg Pro Met		785	790	795		800		AGC AGC CGA AGT TTC CCT CGA AGC CTG GAT GAC TCT GAG GAG GAT GAC	2514	Ser Ser Arg Ser Phe Pro Arg Ser Leu Asp Asp Ser Glu Glu Asp Asp		805	810	815																																																					
720																																																																																																									
ACC GTG GAT GAC ATT TCA GAG AGT CTG CGG CAA GGA GGA GGC AAG TTA	2274																																																																																																								
Thr Val Asp Asp Ile Ser Glu Ser Leu Arg Gln Gly Gly Gly Lys Leu																																																																																																									
725	730	735		AAC TTT GAC GAA CTT CGA CAA GAT CTC AAA GGG AAG GGC CAT ACT GAT	2322	Asn Phe Asp Glu Leu Arg Gln Asp Leu Lys Gly Lys Gly His Thr Asp		740	745	750		GCA GAG ATT GAG GCA ATA TTC ACA AAG TAC GAC CAA GAT GGA GAC CAA	2370	Ala Glu Ile Glu Ala Ile Phe Thr Lys Tyr Asp Gln Asp Gly Asp Gln		755	760	765		GAA CTG ACC GAA CAT GAA CAT CAG CAG ATG AGA GAC GAC TTG GAG AAA	2418	Glu Leu Thr Glu His Glu His Gln Gln Met Arg Asp Asp Leu Glu Lys		770	775	780		GAG AGG GAG GAC CTG GAT TTG GAT CAC AGT TCT TTA CCA CGT CCC ATG	2466	Glu Arg Glu Asp Leu Asp Leu Asp His Ser Ser Leu Pro Arg Pro Met		785	790	795		800		AGC AGC CGA AGT TTC CCT CGA AGC CTG GAT GAC TCT GAG GAG GAT GAC	2514	Ser Ser Arg Ser Phe Pro Arg Ser Leu Asp Asp Ser Glu Glu Asp Asp		805	810	815																																																													
735																																																																																																									
AAC TTT GAC GAA CTT CGA CAA GAT CTC AAA GGG AAG GGC CAT ACT GAT	2322																																																																																																								
Asn Phe Asp Glu Leu Arg Gln Asp Leu Lys Gly Lys Gly His Thr Asp																																																																																																									
740	745	750		GCA GAG ATT GAG GCA ATA TTC ACA AAG TAC GAC CAA GAT GGA GAC CAA	2370	Ala Glu Ile Glu Ala Ile Phe Thr Lys Tyr Asp Gln Asp Gly Asp Gln		755	760	765		GAA CTG ACC GAA CAT GAA CAT CAG CAG ATG AGA GAC GAC TTG GAG AAA	2418	Glu Leu Thr Glu His Glu His Gln Gln Met Arg Asp Asp Leu Glu Lys		770	775	780		GAG AGG GAG GAC CTG GAT TTG GAT CAC AGT TCT TTA CCA CGT CCC ATG	2466	Glu Arg Glu Asp Leu Asp Leu Asp His Ser Ser Leu Pro Arg Pro Met		785	790	795		800		AGC AGC CGA AGT TTC CCT CGA AGC CTG GAT GAC TCT GAG GAG GAT GAC	2514	Ser Ser Arg Ser Phe Pro Arg Ser Leu Asp Asp Ser Glu Glu Asp Asp		805	810	815																																																																					
750																																																																																																									
GCA GAG ATT GAG GCA ATA TTC ACA AAG TAC GAC CAA GAT GGA GAC CAA	2370																																																																																																								
Ala Glu Ile Glu Ala Ile Phe Thr Lys Tyr Asp Gln Asp Gly Asp Gln																																																																																																									
755	760	765		GAA CTG ACC GAA CAT GAA CAT CAG CAG ATG AGA GAC GAC TTG GAG AAA	2418	Glu Leu Thr Glu His Glu His Gln Gln Met Arg Asp Asp Leu Glu Lys		770	775	780		GAG AGG GAG GAC CTG GAT TTG GAT CAC AGT TCT TTA CCA CGT CCC ATG	2466	Glu Arg Glu Asp Leu Asp Leu Asp His Ser Ser Leu Pro Arg Pro Met		785	790	795		800		AGC AGC CGA AGT TTC CCT CGA AGC CTG GAT GAC TCT GAG GAG GAT GAC	2514	Ser Ser Arg Ser Phe Pro Arg Ser Leu Asp Asp Ser Glu Glu Asp Asp		805	810	815																																																																													
765																																																																																																									
GAA CTG ACC GAA CAT GAA CAT CAG CAG ATG AGA GAC GAC TTG GAG AAA	2418																																																																																																								
Glu Leu Thr Glu His Glu His Gln Gln Met Arg Asp Asp Leu Glu Lys																																																																																																									
770	775	780		GAG AGG GAG GAC CTG GAT TTG GAT CAC AGT TCT TTA CCA CGT CCC ATG	2466	Glu Arg Glu Asp Leu Asp Leu Asp His Ser Ser Leu Pro Arg Pro Met		785	790	795		800		AGC AGC CGA AGT TTC CCT CGA AGC CTG GAT GAC TCT GAG GAG GAT GAC	2514	Ser Ser Arg Ser Phe Pro Arg Ser Leu Asp Asp Ser Glu Glu Asp Asp		805	810	815																																																																																					
780																																																																																																									
GAG AGG GAG GAC CTG GAT TTG GAT CAC AGT TCT TTA CCA CGT CCC ATG	2466																																																																																																								
Glu Arg Glu Asp Leu Asp Leu Asp His Ser Ser Leu Pro Arg Pro Met																																																																																																									
785	790	795		800		AGC AGC CGA AGT TTC CCT CGA AGC CTG GAT GAC TCT GAG GAG GAT GAC	2514	Ser Ser Arg Ser Phe Pro Arg Ser Leu Asp Asp Ser Glu Glu Asp Asp		805	810	815																																																																																													
795		800		AGC AGC CGA AGT TTC CCT CGA AGC CTG GAT GAC TCT GAG GAG GAT GAC	2514	Ser Ser Arg Ser Phe Pro Arg Ser Leu Asp Asp Ser Glu Glu Asp Asp		805	810	815																																																																																															
800																																																																																																									
AGC AGC CGA AGT TTC CCT CGA AGC CTG GAT GAC TCT GAG GAG GAT GAC	2514																																																																																																								
Ser Ser Arg Ser Phe Pro Arg Ser Leu Asp Asp Ser Glu Glu Asp Asp																																																																																																									
805	810	815																																																																																																							
815																																																																																																									

FIG. 5D

GAT GAA GAT AGC GGA CAT AGC TCC AGA AGG AGG GGA AGC ATT TCT AGT 2562
 Asp Glu Asp Ser Gly His Ser Ser Arg Arg Arg Gly Ser Ile Ser Ser
 820 825 830

 GGC GTT TCT TAC GAA GAG TTT CAA GTC CTG GTG AGA CGA GTG GAC CGG 2610
 Gly Val Ser Tyr Glu Glu Phe Gln Val Leu Val Arg Arg Val Asp Arg
 835 840 845

 ATG GAG CAT TCC ATC GGC AGC ATA GTG TCC AAG ATT GAC GCC GTG ATC 2658
 Met Glu His Ser Ile Gly Ser Ile Val Ser Lys Ile Asp Ala Val Ile
 850 855 860

 GTG AAG CTA GAG ATT ATG GAG CGA GCC AAA CTG AAG AGG AGG GAG GTG 2706
 Val Lys Leu Glu Ile Met Glu Arg Ala Lys Leu Lys Arg Arg Glu Val
 865 870 875 880

 CTG GGA AGG CTG TTG GAT GGG GTG GCC GAG GAT GAA AGG CTG GGT CGT 2754
 Leu Gly Arg Leu Leu Asp Gly Val Ala Glu Asp Glu Arg Leu Gly Arg
 885 890 895

 GAC AGT GAA ATC CAT AGG GAA CAG ATG GAA CGG CTA GTA CGT GAA GAG 2802
 Asp Ser Glu Ile His Arg Glu Gln Met Glu Arg Leu Val Arg Glu Glu
 900 905 910

 TTG GAA CGC TGG GAA TCC GAT GAT GCA GCT TCC CAG ATC AGT CAT GGT 2850
 Leu Glu Arg Trp Glu Ser Asp Asp Ala Ala Ser Gln Ile Ser His Gly
 915 920 925

 TTA GGC ACG CCA GTG GGA CTA AAT GGT CAA CCT CGC CCC AGA AGC TCC 2898
 Leu Gly Thr Pro Val Gly Leu Asn Gly Gln Pro Arg Pro Arg Ser Ser
 930 935 940

 CGC CCA TCT TCC CAA TCT ACA GAA GGC ATG GAA GGT GCA GGT GGA 2946
 Arg Pro Ser Ser Ser Gln Ser Thr Glu Gly Met Glu Gly Ala Gly Gly
 945 950 955 960

 AAT GGG AGT TCT AAT GTC CAC GTA TGA TAT GTG TGT TTC AGT ATG TGT 2994
 Asn Gly Ser Ser Asn Val His Val
 965

 GTT TCT AAT AAG TGA GGA AGT GGC TGT CCT GAA TTG CTG TAA CAA GCA 3042
 CAC TAT TTA TAT GCC CTG ACC ACC ATA GGA TGC TAG TCT TTG TGA CCG 3090
 ATT GCT AAT CTT CTG CAC TTT AAT TTA TTT TAT ATA AAC TTT ACC CAT 3138
 GGT TCA AAG ATT TTT TTT TCT TTT TCT CAT ATA AGA AAT CTA GGT GTA 3186
 AAT ATT GAG TAC AGA AAA AAA ATC TTC ATG ATG TGT ATT GAG CGG TAC 3234
 GCC CAG TTG CCA CCA TGA CTG AGT CTT CTC AGT TGA CAA TGA AGT AGC 3282

FIG. 5E

CTT TTA AAG CTA GAA AAC TGT CAA AGG GCT TCT GAG TTT CAT TTC CAG	3330
TCA CAA AAA TCA GTA TTG TTA TTT TTT TCC AAG AGT GTG AAG GAA AAT	3378
GGG GCA ATT CCT TTC CAC TCT GGC ATA GTT CAT GAG CTT AAT ACA TAG	3426
CTT TCT TTT AAG AAA GGA GCC TTT TTT TTC AAC TAG CTT CCT GGG GTA	3474
AAC TTT TCT AAA AGA TAA AAT GGG AAG GAA CTC CAA ACT ATG ATA GAA	3522
TCT GTG TGA ATG GTT AAG ATG AAT GTT AAA TAC TAT GCT TTT TTG TAA	3570
GTT GAT CGT ATC TGA TGT CTG TGG GAC TAA CTG TAT CAC TTA ATT TTT	3618
ACC TTA TTT TGG CTC TAA TTT GAA TAA GCT GAG TAA AAC CAC CAA AGA	3666
TCA GTT ATA GGA TAA AAT GGC ATC TCT AAC CAT AAC ACA GGA GAA TTG	3714
GAA GGA GCC CTA AGT TGT CAC TCA GTT TAA TTT CTT TTA ATG GTT AGT	3762
TTA GCC TAA AGA TTT ATC TGC ATA TTC TTT TTC CCA TGT GGC TCT ACT	3810
CAT TTG CAA CTG AAT TTA ATG TTA TAA CTC ATC TAG TGA GAC CAA CTT	3858
ACT AAA TTT TTA GTA TGC ACT GAA AGT TTT TAT CCA ACA ATT ATG TTC	3906
ATT TTA AGC AAA ATT TTA AGA AAG TTT TGA AAT TCA TAA AGC ATT TGG	3954
TTT TAA ACT ATT TTA AGA ATA TAG TAC TCG GTC AGG TAT GNN NCA CGC	4002
CTG TAA TCC CAG CAC TTT GGG AGG CCG AAA CAG GCG AAT CAC TTG AGC	4050
CCA GGA GTT CAA GAC CAA CAT GGG CAA TGT GGC GAA ACT CCA TCT CTA	4098
CAA AAA ATG CAA AAA TAA AAA ATA TAG TAC TCA AGT ATT CTT GAT CCT	4146
GTG TTT CAA AAC TAG AAT TTG TAA TGC AAA TGG AGC TCA GTC TAA TAA	4194
AAA AGA GGT TTT GGT ATT AAA AGT TCA TAC ATT AGA CAG TAT CAG CCA	4242
AAA TTT GAG TTA GCA ACA CTG TTT TCT TTA CGA GAG GGT CTC ACC CAA	4290
ATT TAT GGG GAG AAA TCT ATT TCT CAA AAA AAA AAA ATC TTC TTT TAC	4338
AGA AAT GTT GAG TAA GGT GAC ATT TTG AGC GCT AAT AAG CAA AAG AGC	4386
ATG CAG TGC TGT TGA ATA ACC CTC ACT TGG AGA ACC AAG AGA ATC CTG	4434
TCG TTT AAT GCT ATA TTT TAA TTT CAC AAG TTG TTC ATT TAA CTG GTA	4482
GAA TGT CAG TCC AAT CTC CAA TGA GAA CAT GAG CAA ATA GAC CTT TCC	4530

FIG. 5F

AGG TTG AAA GTG AAA CAT ACT GGG TTT CTG TAA GTT TTT CCT CAT GGC	4578
TTC ATC TCT ATC TTT ACT TTC TCT TGA ATA TGC TAC ACA AAG TTC TTT	4626
ATT ACT ACA TAC TAA AGT TTG CAT TCC AGG GAT ATT GAC TGT ACA TAT	4674
TTA TGT ATA TGT ACC ATG TTG TTA CAT GTA AAC AAA CTT CAA TTT GAA	4722
GTG CAG CTA TTA TGT GGT ATC CAT GTG TAT CGA CCA TGT GCC ATA TAT	4770
CAA TTA TGG TCA CTA GAA AGT CTC TTT ATG ATA CTT TTT ATT GTA CTG	4818
TTT TTC ATT TCA CTT GCA AAA TTT TGC AGA ATT CCT CCT TTC TAC CCA	4866
TAA ATT ACA TAT AAT TTT TCT TCT TTA GTC ATG GAG AAC NCC CCC CCA	4914
TCA TCT CAN CCC TAT TAN CTT TCC CAT GTG TAC TGG TAT TAT TAA AAA	4962
GAC ATT TAC ATA CGC AAG TTT TTC ACT GAC AAN CAA GAA TGT TAT TAA	5010
TGT GTA ATA CTG AGC ACN TTT ACT TCT TAA TAA AAA CTT GAT ATA NT	5057

FIG. 5G